

FIG. 1 PRIOR ART

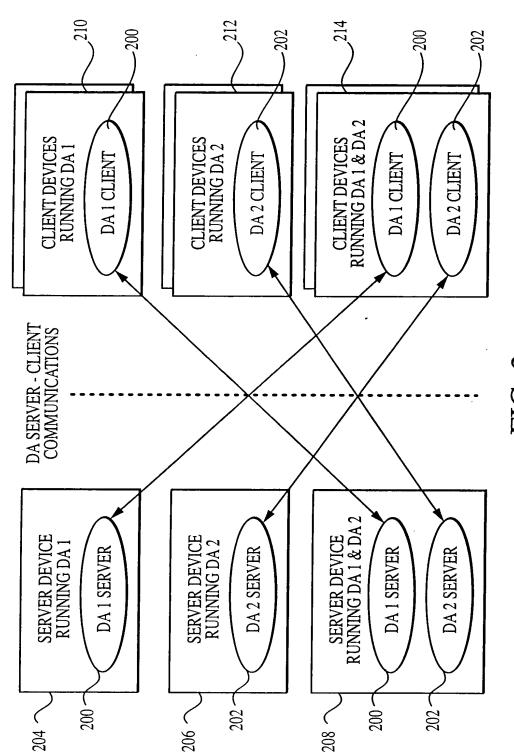
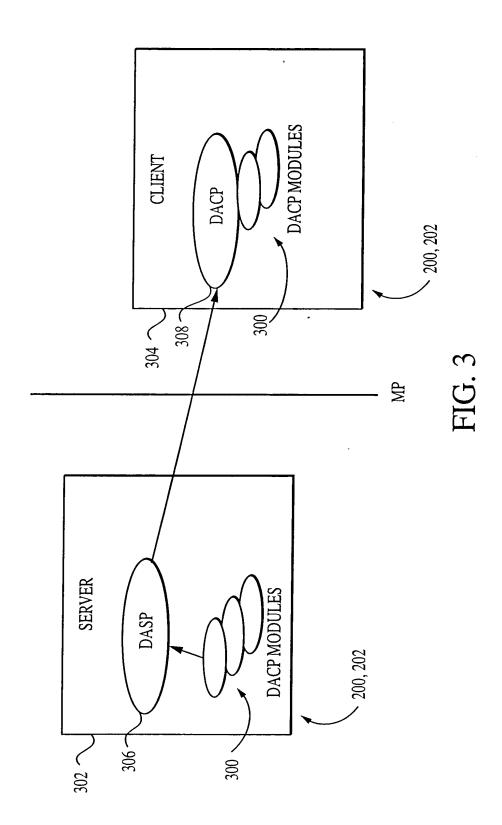


FIG. 2



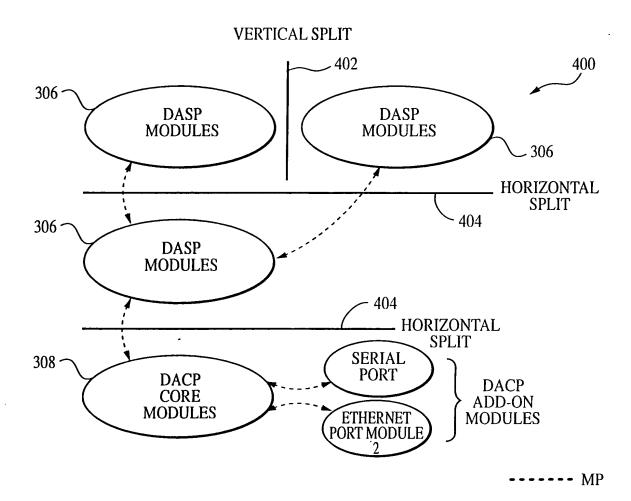
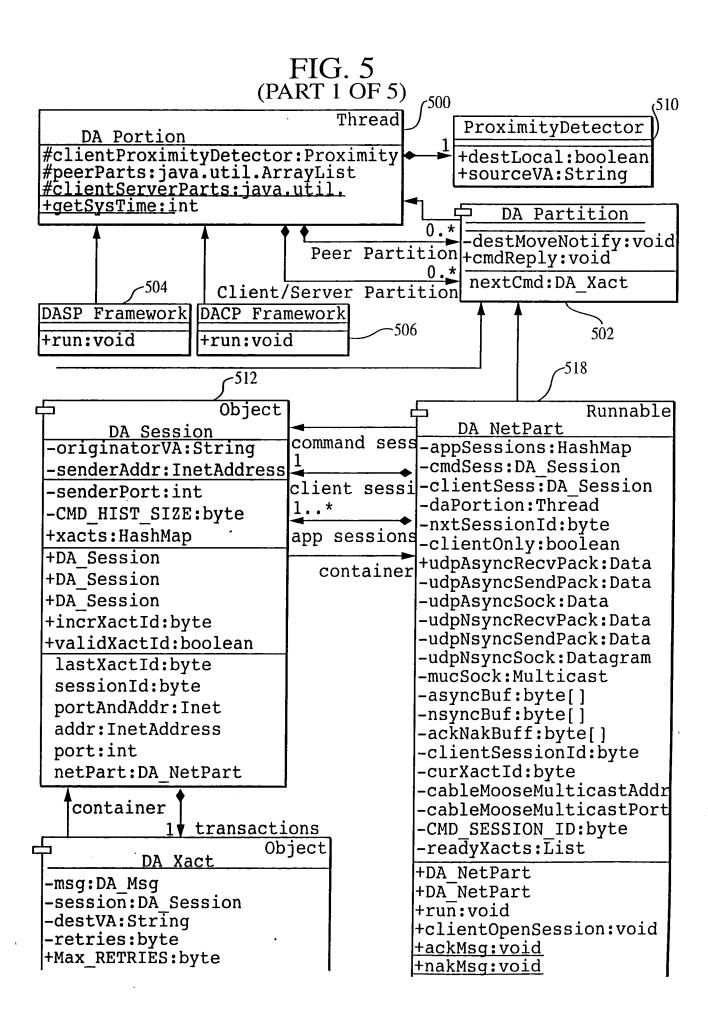


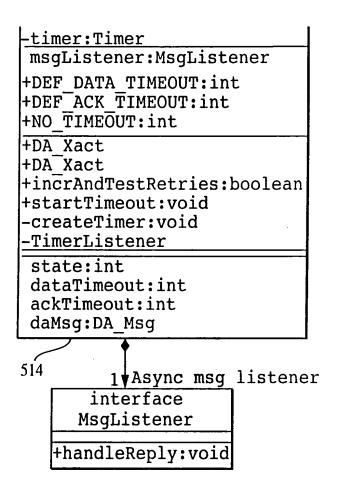
FIG. 4



```
Runnable
DA IPCPart
-AppCmds:Vector
+DA IPCPart
+ackMsg:void
+nakMsg:void
+destMoveNotify:void
+recvMsg:DA Xact
+sendMsg:void
+run:void
```

```
DA Msg
+HDR SIZE:byte
+BIG BUF HDR SIZE:byte
-dataLen:int
-buffer:byte[]
-bufIdx:int
-curBufNum:int
                         Msg
-bufBitSet:Bits
-numBufs:short
-totNumBuf:short
+BASIC HDR LEN:byte
+MULTI BUF HDR LEN:byte
+MAX BUF LEN:short
+MAX DATA LEN:short
+NAK BUF LEN:byte
+FLAGS IDX:byte
+CMD_TYPE_IDX:byte
+SESS_ID_IDX:byte
+XACT ID IDX:byte
+SENT TIME IDX:byte
+BUF NUM IDX:byte
+TOT BUFS IDX: byte
```

FIG. 5 (PART 2 OF 5)



+destMoveNotify:void +recvMsq:DA Xact +sendMsg:void +sendAsyncMsq:void +sendSmallMsq:void +createXactAndSend:void +sendAndRecvXact:byte[] +serverOpenSession:void +openSessionReply:void +closeSession:boolean -handleCableMooseCmd: -handleAckNak:void -handleAppMsg:void +xactReply:void +newSessionId:boolean +joinCableMooseGroup: +makeUdpSocket:Datagram sourceVA:String nextXact:DA Xact asyncRecvAddr:Inet asyncRecvPort:int

FIG. 5 (PART 3 OF 5)

```
+LAST BUF LEN IDX:byte
+NAK REASON IDX:byte
+BUFS MASK: byte
+ACK MASK:byte
+NAK MASK:byte
+REPLY MASK:byte
+VERSION:byte
+DA Msq
+DA Msq
+addData:void
+makePktHdr:void
+copyHdr:byte[]
+allBufsRecvd:boolean
+insertSentTime:void
+setbuffer:void
+getHdrLen:int
+parseCmdType:short
+parseSessionId:byte
+parseXactId:byte
+parseFlags:byte
+parseBufnum:byte
+parseReply:boolean
+parseAck:boolean
+parseNak:boolean
+parseMultiBufs:boolean
cmdType:short
sentTime:int
databyte[]
sessionId:byte
xactId:byte
flags:byte
```

Fault +INVALID SESSION ID:short +INVALID XACT ID:short +INVALID HDR:short +RETRIES EXCEEDED:short +INVALID MSG LEN:short +BUF OUT OF ORDER:short +CMD NOT FOUND:short +SOCKET SECURITY BREECH:short +SOCKET IO FAILURE:short +GROUP JOIN FAILURE:short +REPLY WO CMD:short +REPLY WO LISTENER:short <u>+log:vo</u>id +log:void +loq:void

CmdTypes

+KILL CMD CMD:short

+OPEN SESSION CMD:short

+OPEN SESSION REPLY CMD:short

+CLOSE SESSION CMD:short

+CLOSE SESSION REPLY CMD:short

+RESERVED CMD MASK:short

+APP CMD MIN:int

+OPEN SESSION CMD SIZE:int

+OPEN SESSION REPLY SIZE:int

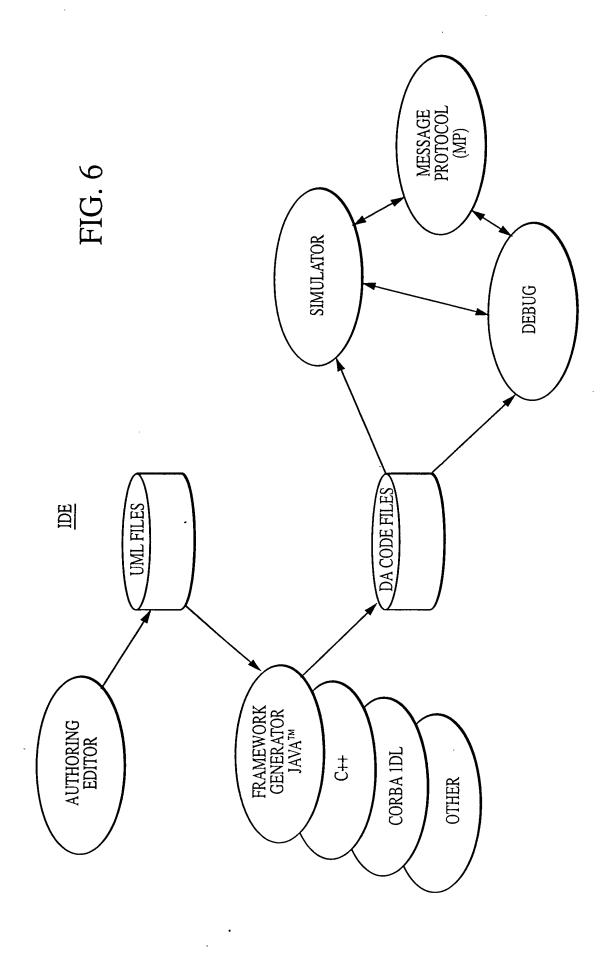
## XactStates

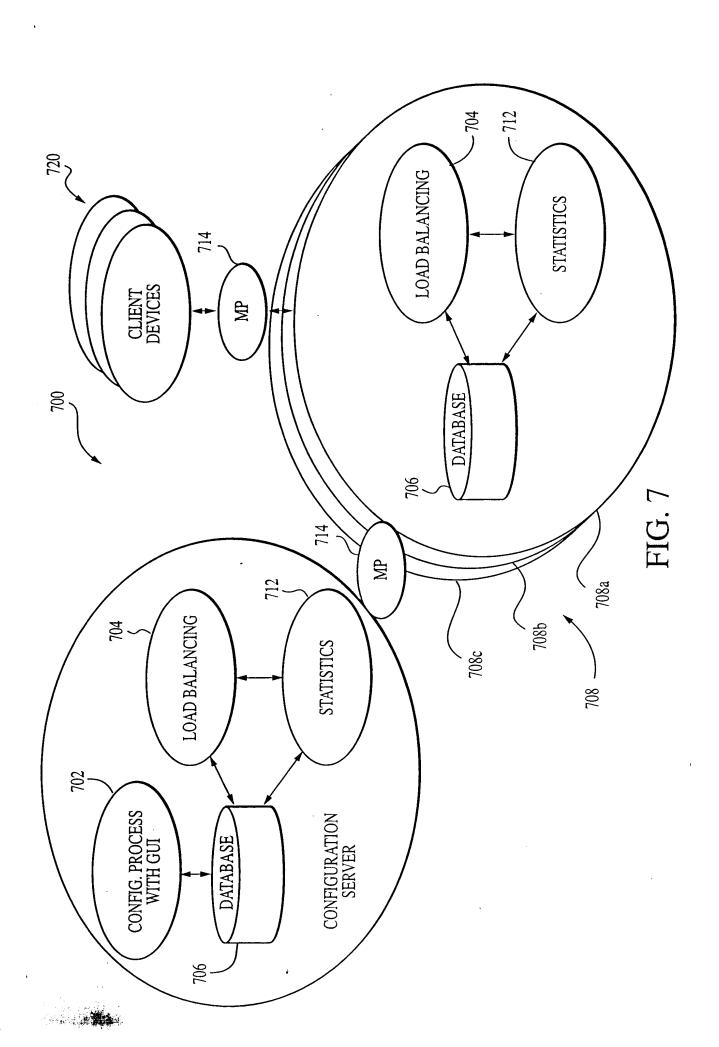
+INIT\_S:int +CLIENT\_ACK\_WAIT\_S:int +CLIENT\_DATA\_WAIT\_S:int +DONE\_S:int +SERVER\_MULTI\_BUF\_WAIT\_S:int +SERVER\_APP\_WAIT\_S:int

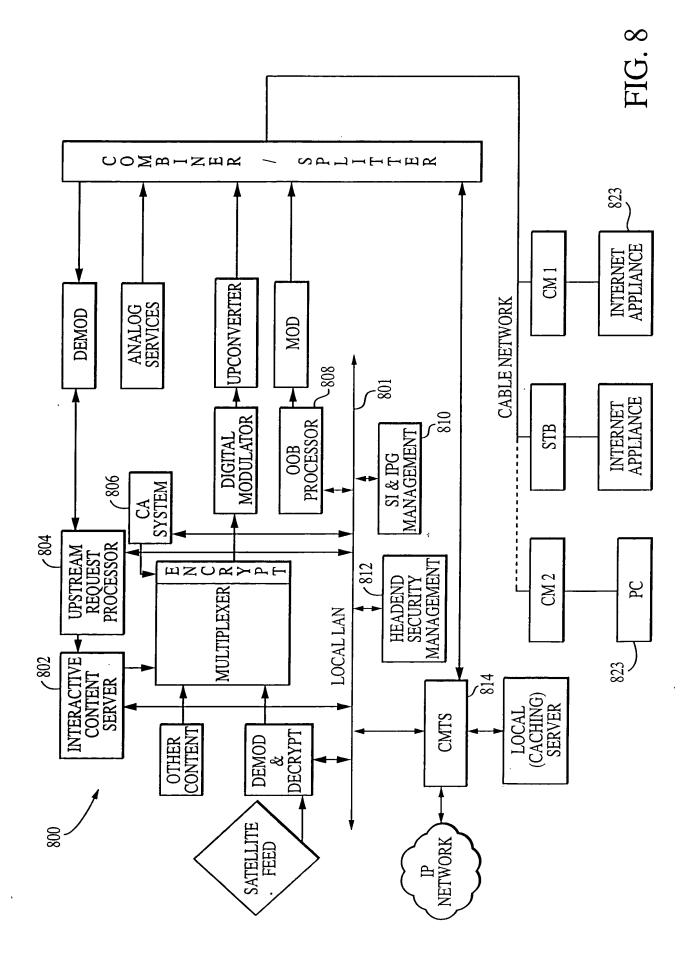
tester

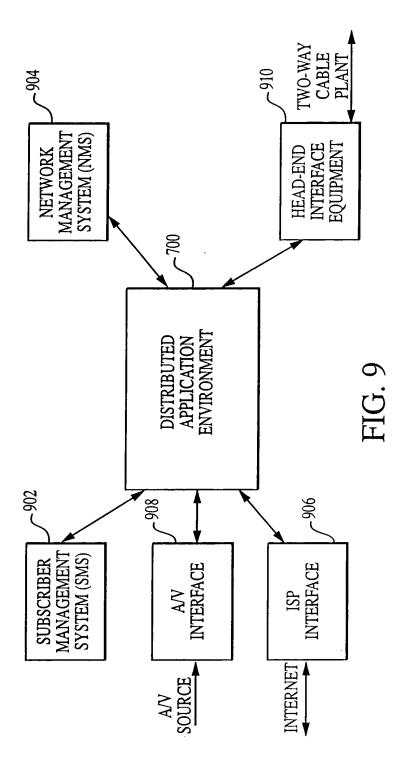
-main:void

FIG. 5 (PART 5 OF 5)









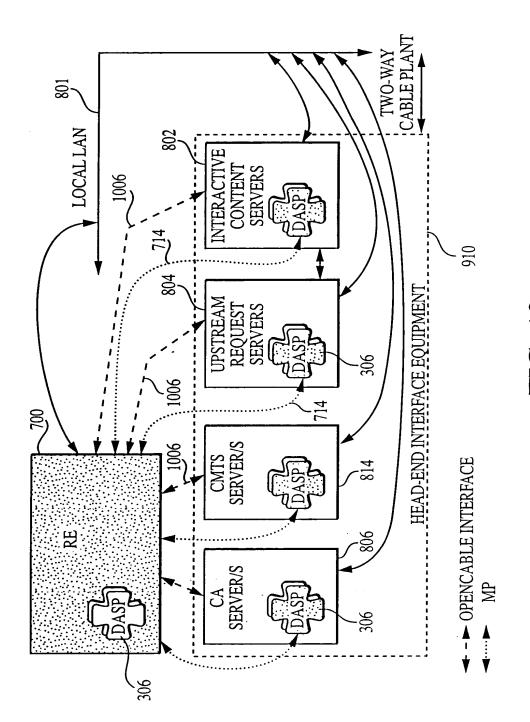


FIG. 10

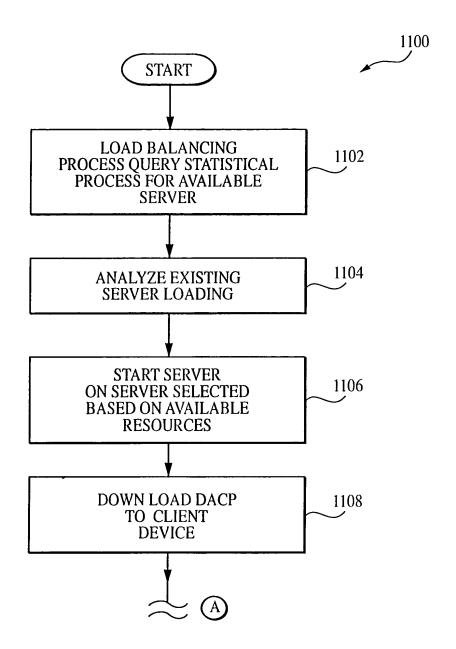


FIG. 11 (PART 1 OF 2)

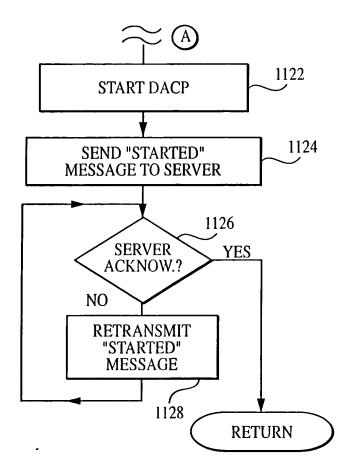


FIG. 11 (PART 2 OF 2)

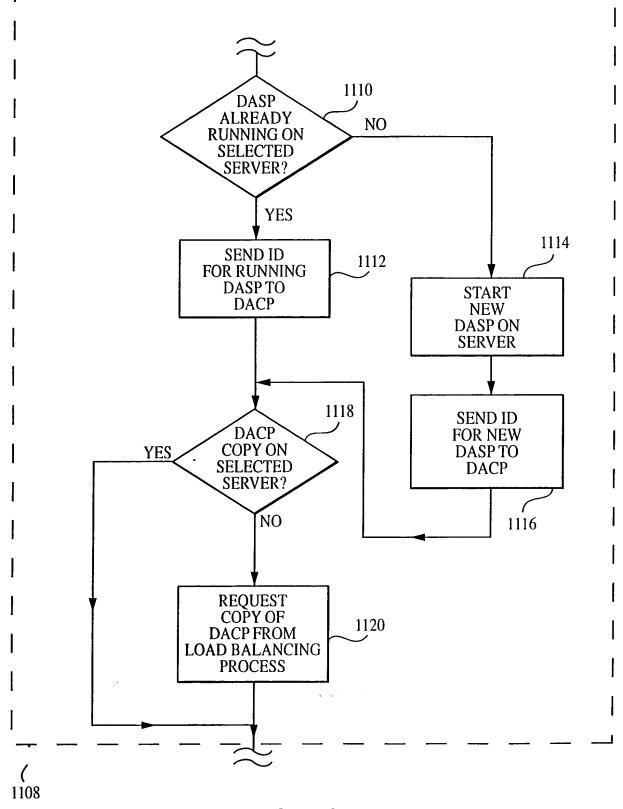


FIG. 12

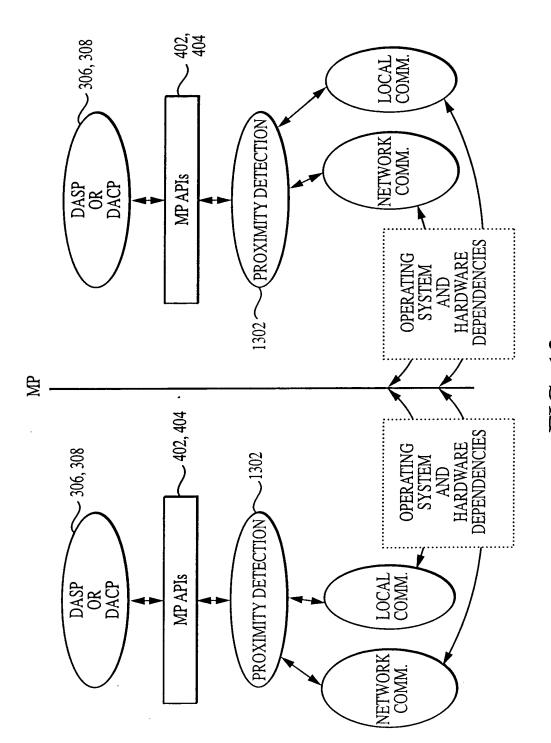


FIG. 13

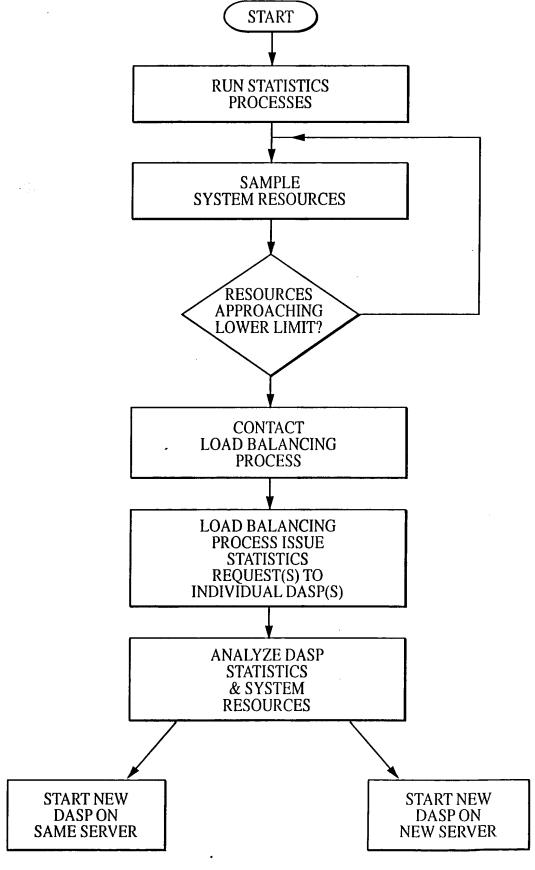
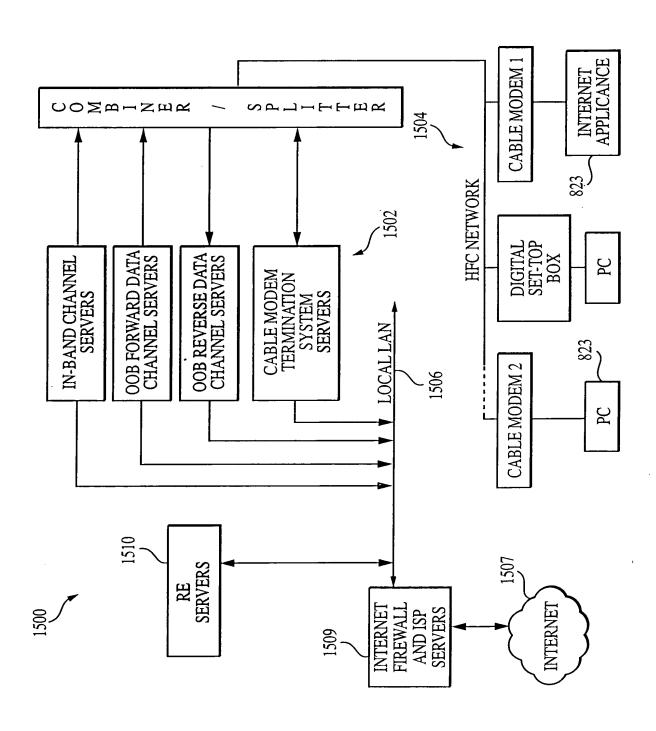
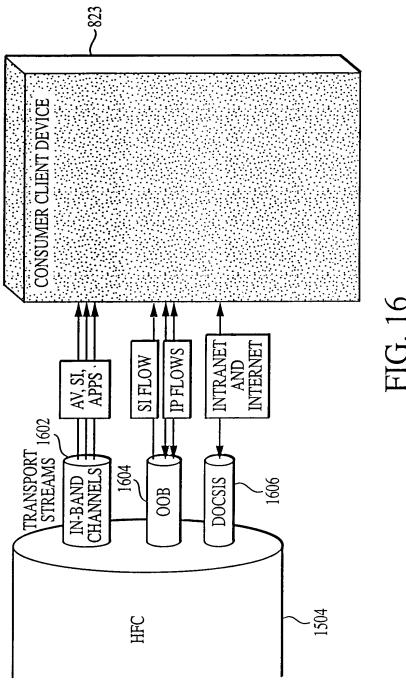


FIG. 14





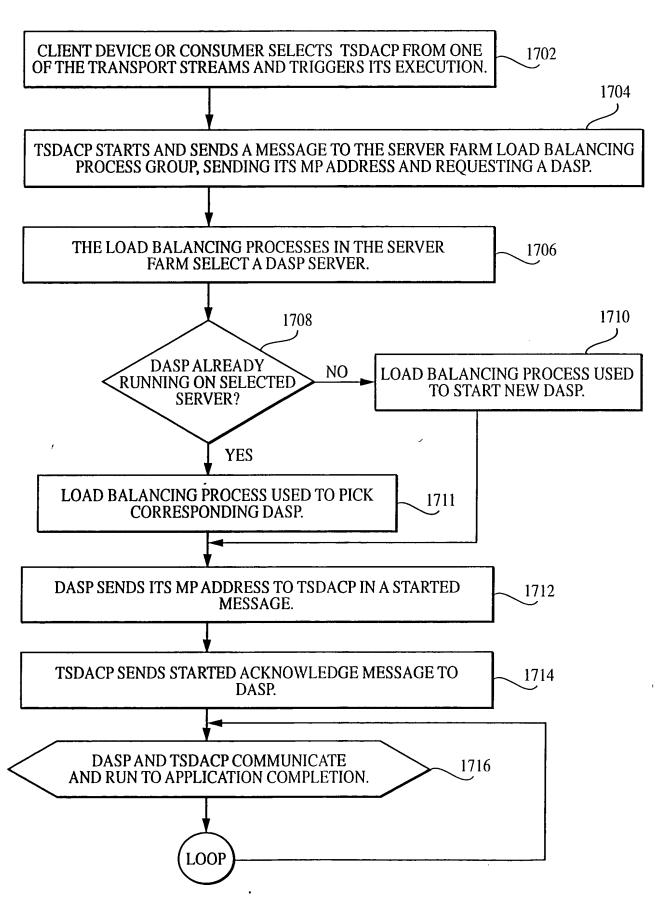


FIG. 17

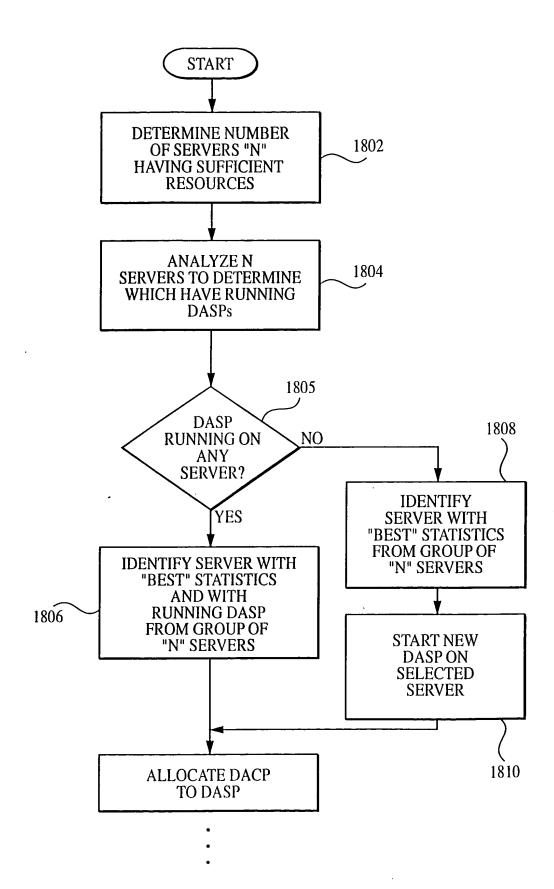


FIG. 18

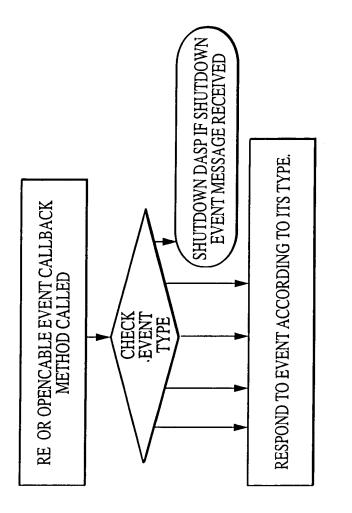
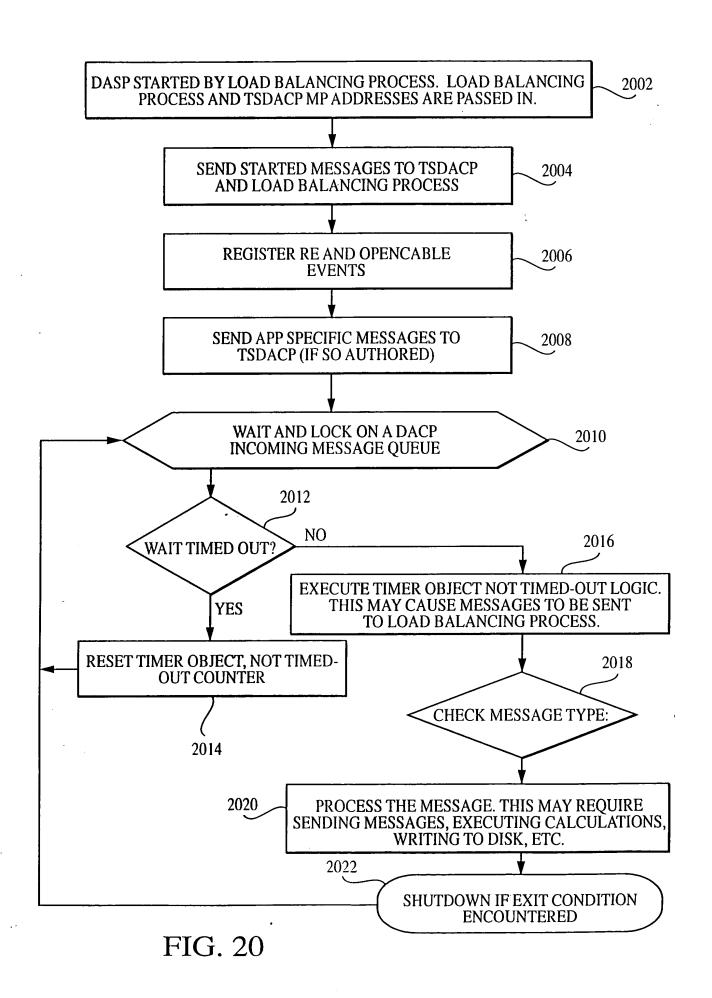
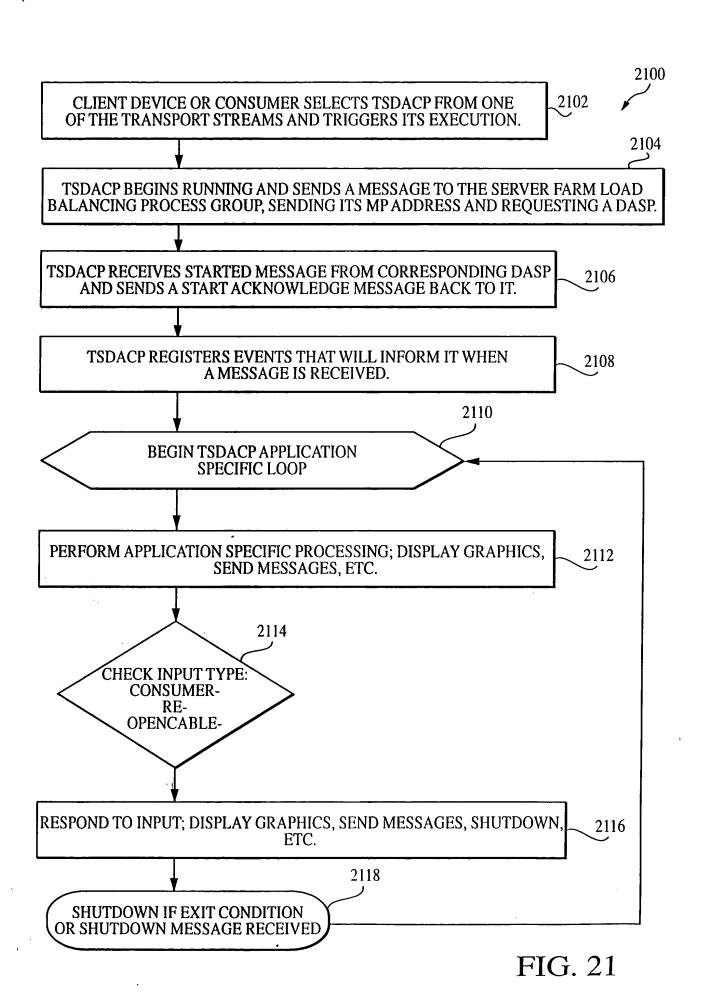


FIG. 19





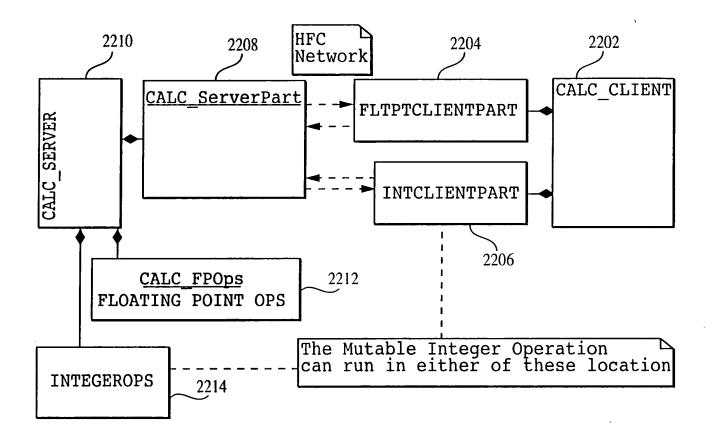


FIG. 22

